

Roll No.

BCA-502(O)

B. C. A. (Fifth Semester)

EXAMINATION, Dec., 2014

(Old Course)

Paper Second

BASICS OF DATABASE MANAGEMENT SYSTEM

Time : Three Hours]

[Maximum Marks : 75

Note : Section A is compulsory. Attempt any seven questions from Section B and any one question from Section C.

Section—A 6 each

(Numerical/Analytical/Problematic Questions)

1. Define the Codd's rules in detail.
2. What are different security threats ?
3. What is an entity ? What is a relationship in RDBMS ?

Section—B 6 each

(Short Answer Type Questions)

4. What is DBA ? What are the responsibilities of a DBA ?
5. What is Data Model ? List the types of data model used.

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6. Explain with example the insert, delete and update anomalies for a relation.
7. What is the difference between specialization and generalization with respect to database ?
8. What is Normalization ? Giving example explain clearly the 3rd normal form of database.
9. What are different security threats ?
10. What is the difference between logical data independence and physical data independence ?
11. What are different locking techniques for transaction processing ?
12. Compare file-oriented system and database system.
13. What are different recovery techniques.
14. The following FD's hold on relation :

$$R(A, B, C, D, E)$$

$$A \rightarrow BC, CD \rightarrow E, B \rightarrow D, E \rightarrow A$$

Determine whether $E \rightarrow D$ holds on R and find candidate key for R.

Section—C 15 each

(Long Answer Type Questions)

15. Differentiate between the following :
 - (i) SQL and SQL Plus
 - (ii) Delete and Drop Command
 - (iii) Union and Union all

- (iv) Alter and Update
- (v) Drop and Truncate

16. (a) Briefly discuss the history of database system. Explain the advantages of DBMS over file management system.
- (b) What is Authorization and Authentication in Oracle ?